

REMARKS

The final Office Action mailed July 13, 2007, has been received and the Examiner's comments carefully reviewed. In the present response, claims 1, 12, 21, and 29 are amended. Claims 6-7, 16-17, 22, 24, 30, and 32 are canceled. The specification is amended on page 9 to remove certain language objectionable to the Examiner. No new matter has been added by way of these amendments. Favorable reconsideration of this application is requested in view of the following remarks.

Objection to the Specification

In the Office Action, the disclosure is objected to because it contains a trademarked term (i.e. "Intel" on page 9). The Examiner maintains the rejection in that "it [does not] identify the products available by the manufacturers Intel or Advanced Micro Devices." Office Action at 3. Applicants disagree with the Examiner's characterization of the use of the trademarked term in the specification, as it is clear that the trademarked term "Intel" (and "Advanced Micro Devices", to the extent that the objection likewise applies) exclusively refers to the processing units of that sentence of the specification. Nevertheless, Applicants have removed the term from the specification to moot the rejection. Applicants note that removal of this phrase from the specification is in no way intended to affect the scope of the disclosure, as the use of the trademarked terms was merely to provide examples of objects useable in conjunction with the invention. Because Applicants have removed the objected-to language from the specification, Applicants respectfully request reconsideration and withdrawal of the objection.

Claim Rejections - 35 USC § 112

In the Office Action, claims 9-10 and 18-19 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office Action states that the claims recite the full form as (Development, Run-time, Development) of abbreviation "DRD" which the Examiner asserts is not supported by the original specification. Applicants respectfully traverse this rejection.

Claims 9 and 18 recite that "the bi-directional link is a DRD (Development, Run-time, Development) link." In addition, claims 10 and 19 recite that "the DRD (Development, Run-

time, Development) link includes a database.” Applicants assert that these phrases are fully supported in the specification. Specifically, the specification describes:

“Link **599** is a Development, Run-time, Development (DRD) link. Preferably, the DRD link **599** is implemented using a telecommunications and operations infrastructure (TOI) containing combinations of a distributed data-base and software interprocess communication (IPC) mechanisms. In the DRD link **599**, the information sent through the data-base or IPC mechanisms are defined by XML schemas and contain both IDE **500** and RTE **600** data. The XML schema could be sent in messages or optionally be used to configure a distributed data-base.”

See, page 29, line 29; page 30, ll. 1-7.

The specification also describes that “[t]he link **518** is a bi-directional, integrated link The dyadic relationship for link **518** is stored in the DRD link **599**.¹” See, e.g., page 27, ll. 4-10. The specification further describes that “[t]he DRD **599** can include a database, which can be a distributed data base.” See, e.g., page 23, ll. 9-10.

Therefore, claims 9-10 and 18-19 are fully supported by the original specification and comply with the written description requirement in § 112. Further, the claimed subject matter is fully described in the specification in such a way as to reasonably convey to one skilled in the art that such was in the possession of Applicants at the time the application was filed.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claim Rejections - 35 USC § 103

A. **Claims 1-3, 5-6, 8-13, 15-16, 18-24, 26-32, and 34-36**

In the Office Action, claims 1-3, 5-6, 8-13, 15-16, 18-24, 26-32, and 34-36 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Breeden et al. (US Publication No. 2006/0206856) in view of Gove et al. (U.S. Publication No. 2004/0006760). Applicants respectfully traverse these rejections.

First, claims 1 and 12, as currently presented, recite an integrated development environment linked to a run time environment that includes, among other things, “whereby the failures detected in the run-time environment are traced back, using the agents, to the integrated development environment to determine model errors.” Likewise, independent claims 21 and 29 require “detecting failures within the run-time environment; tracing the failures back to the integrated development environment, using the diagnostic agents; and identifying the model errors in the integrated development environment based on the tracing of the failures.” Applicants assert that the combination of Breeden et al. and Gove et al. fails to disclose or suggest the claimed invention.

Neither Breeden et al. nor Gove et al. discloses a system in which errors detected in a run time environment are traced back to an integrated development environment to determine model errors. As the Office Action recognizes, “Breeden does not explicitly disclose whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors.” Office Action, p. 5. Gove et al. also fails to disclose or suggest that “the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors.” Rather, Gove et al. discloses that “using an IDE, a programmer develops, compiles, runs, debugs and profiles the code from within the IDE.” (emphasis added) Gove et al. further discloses that “[b]ecause the IDE is integrated, if the compiler reports a problem, then the line which causes the problem is high-lighted.” See, paragraph [0021]. In other words, Gove et al. discloses only one environment which is the integrated development environment. Therefore, Gove et al. fails to disclose or suggest that “the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors”, as recited in claims 1 and 12. Gove et al. thus also fails to disclose similar limitations recited in claims 21 and 29.

Furthermore, neither Breeden et al. nor Gove et al. discloses use of agents to trace back model errors to the integrated development environment, as required in each of the independent claims. Breeden et al. discloses neither tracing errors back to an IDE from a run-time environment nor use of agents to do so. The portions of Breeden et al. referenced by the Examiner as disclosing agents instead discuss runtime steps that, as shown in Figure 4, relate to controls, display, and current state information (steps 258, 260, and 262). Even if these steps could be construed as agents (a point not conceded by Applicants), none of the runtime steps of

Breeden et al. are described as being used to trace back model errors to an integrated development environment (and in fact do not do so, as discussed in the preceding paragraph). Gove et al. does not disclose a run-time environment (again as discussed in the preceding paragraph), and therefore does not disclose use of agents in tracing errors back from such an environment. Therefore, neither Breeden et al. nor Gove et al discloses the tracing back of model errors using agents, as recited in the independent claims.

Therefore, even if it is proper to combine the cited references (a point which Applicants do not concede), the combination fails to disclose or suggest all limitations of independent claims 1, 12, 21 and 29.

Secondly, Applicant notes that independent claims 1 and 12, as currently presented, also require “a run-time environment having agents that detect failures linked within, the agents including model-based diagnostic agents and learning model-based diagnostic agents.” Likewise, independent claims 21 and 29 each require “detecting failures within the run-time environment by using diagnostic agents including model-based diagnostic agents and learning model-based diagnostic agents.” Applicants assert that the combination of Breeden et al. and Gove et al. fails to disclose or suggest this aspect of the claimed invention.

Neither Breeden et al. nor Gove et al. discloses a system in which model based diagnostic agents and learning model-based diagnostic agents are used in a run-time environment to detect failures linked within the environment. Breeden et al. fails to disclose either model-based diagnostic agents or learning model-based diagnostic agents, and also fails to disclose use of such agents to detect failures linked within. The Examiner asserts that one of the Control container and Lifecycle driver, the control factory, or the servlet container corresponds to the agents of the claims. Applicants disagree. None of these components are described in Breeden et al. as being model-based, let alone learning model-based agents, and none of these components are used to detect failures linked within the run time environment. The Control container and Lifecycle driver are claimed to be used “to determine the look-and-feel of the portal application interface.” See, e.g., Breeden et al., claim 5. The control factory drives control lifecycles during portal application request handling. Id. at claim 6. The servlet containers are not in the run time environment of Breeden et al. (See, e.g., Figure 3), and therefore cannot be the model-based agents or learning model-based agents of the claims. With respect to Gove et al., Applicants again note no run time environment in which such agents may

reside, and therefore assert that Gove et al. also fails to disclose or suggest such an element. Therefore, for at least this second reason, the combination of Breeden et al. and Gove et al. fails to disclose or suggest all limitations of independent claims 1, 12, 21 and 29.

For at least the above reasons, Applicants assert that independent claims 1, 12, 21 and 29 are not rendered obvious by this combination of references, and respectfully request reconsideration and withdrawal of the rejection of the independent claims. Likewise, currently pending claims 2-3, 5 and 8-11 depend from claim 1, claims 13, 15 and 18-20 depend from claim 12, claims 23 and 26-28 depend from claim 21 and claims 31 and 34-36 depend from claim 29. These dependent claims, also rejected on the same basis as the independent claims, inherit all of the limitations from the corresponding independent claims. Applicants respectfully request reconsideration and withdrawal of the rejection of those claims as well.

B. Dependent Claims 4, 7, 14, 25, and 33

In the Office Action, claims 4, 7, 14, 25, and 33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Breeden et al. in view of Gove et al. and further in view of Kanevsky et al. (U.S. Patent No. 6,167,353). Applicants respectfully traverse the rejection.

Applicants note that claim 4 depends from independent claim 1, claim 14 depends from claim 12, claim 25 depends from claim 21, and claim 33 depends from claim 29. These dependent claims therefore inherit all of the limitations of the independent claims from which they depend. Applicant notes that the combination of references, including Breeden et al., Gove et al., and Kanevsky et al. do not render these claims obvious.

Specifically, none of the cited references disclose either “whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors” and “a run-time environment having agents that detect failures linked within, the agents including model-based diagnostic agents and learning model-based diagnostic agents” in the case of independent claims 1 and 11. The references also fail to disclose either “detecting failures within the run-time environment; tracing the failures back to the integrated development environment, using the diagnostic agents; and identifying the model errors in the integrated development environment based on the tracing of the failures” or “detecting failures within the run-time environment by using diagnostic agents including model-based diagnostic

agents and learning model-based diagnostic agents” in the case of independent claims 21 and 29. Applicants assert the same arguments as made above with respect to Breeden et al. and Gove et al., and note that Kanevksy et al. likewise fails to disclose the same elements of the independent claims.

With respect to tracing detected errors from the run-time environment back to the integrated development environment to determine model errors, Applicants observe that the Examiner has not alleged that Kanevsky et al. includes such an element. Furthermore, Applicants assert that Kanevsky et al. wholly fails to disclose such an element. Because none of the cited references include this element (the reasons of which for Breeden et al. and Gove et al. discussed above), Applicants assert that the combination of references cannot render the independent claims (and therefore these dependent claims) obvious for at least this first reason.

Secondly, and with respect to the various agents present in the run time environment, Applicants observe that none of the references disclose use of both model-based agents and learning model-based agents. Model-based agents and learning model-based agents, as described, for example on page 44 of the present application, are agents which use models to assess failures of testable systems. While a standard model-based agent uses an existing model and iterative procedures, a learning model develops a model by observing a system. Each of the independent claims (and therefore these rejected claims depending therefrom) requires the presence of both types of models.

Applicants note that none of the prior art references asserted discloses both model-based agents and learning model-based agents to detect errors in a run-time environment. Applicants refer to the discussion of Breeden et al. and Gove et al. above, and reassert that these references fail to disclose such agents as claimed. Furthermore, Kanevsky et al. relates to a model-based diagnostic system, but in no way suggests that such a system would include both model-based agents and learning model-based agents to detect failures in a run-time environment. Kanevsky et al. generates a test model by observing a system to be tested, and then selecting and applying tests from a set of diagnostic tests 14. See Kanevsky et al., Figure 1. There is no indication of using both a model-based agent and a learning model-based agent to detect errors in a run-time environment in the disclosure Kanevsky et al., so it cannot remedy the deficiencies of the other cited references. Therefore, each of independent claims 1, 12, 21, and 29 are not rendered

obvious by the combination of references, and none of these dependent claims is rendered obvious for at least the same reasons.

Claim 7 is canceled in the present response, rendering the rejection moot. Therefore, Applicants respectfully request withdrawal of the rejection of this claim. By way of this cancellation, the correctness of the rejection of this claim is in no way conceded.

C. Claim 17

Applicant notes that the Examiner indicated as rejected claim 17 on the cover sheet (page 1) of the Office Action, but did not provide comments on how the claim is rejected in the Office Action. Applicants request appropriate clarification about this, but maintain the allowability of this claim for at least the reasons cited herein with respect to claim 11, from which claim 17 depends, as well as the reasons cited in the previous Response mailed on June 4, 2007. Applicants therefore respectfully request that the Examiner reconsider and withdraw any rejections pending on this claim as well.

Conclusion

It is respectfully submitted that each of the presently pending claims is in condition for allowance and notification to that effect is requested. Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicants reserve the right to raise these arguments in the future. The Examiner is invited to contact Applicants' representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: 10/30/2007


Erik G. Swenson
Reg. No. 45,147
ESwenson/AJL/dc